KC 99'er CONNECTION

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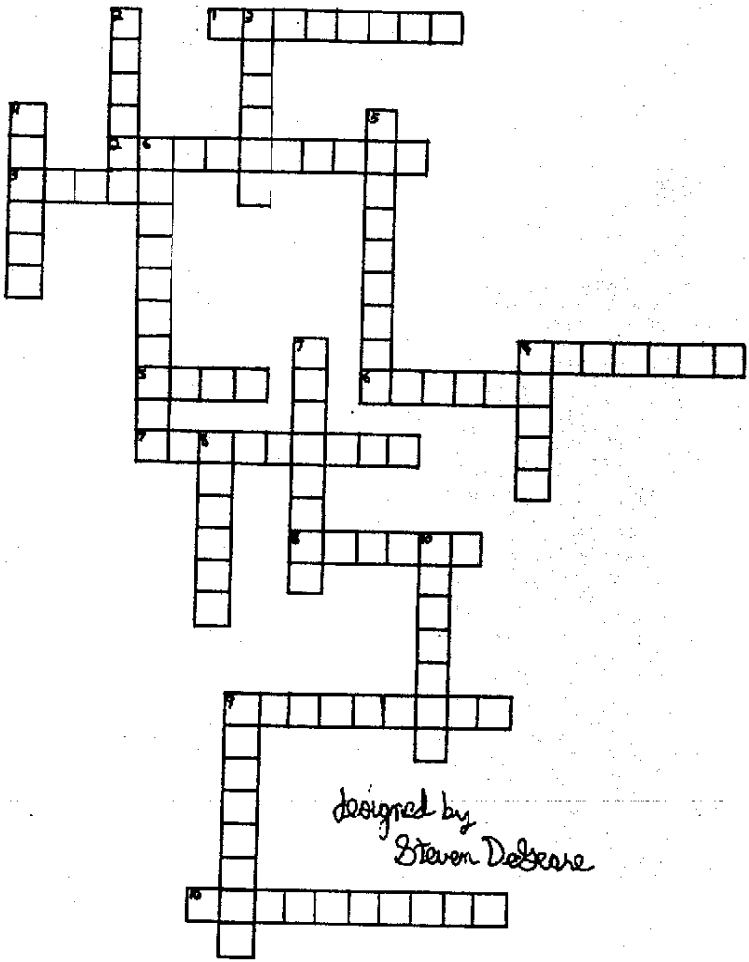
TI'S UNRELEASED LEGENDS...

by Richard A. Fleetwood
Forest Lane TI Users Group
(continues)

The 99/4 is what started everything off for TI in the home computer market. Orignally designed in the late 70's, it finally hit the market in 1980, and for over $1100 you got a 16K, 16 bit computer with built in Basic, and also a 19 inch color moniter. The worst thing about the 99/4 was the keyboard. Then months later after listening to feedback from customers, TI finally did the right thing. They redesigned the 99/4, adding a real keyboard making the touchtyping easier. They rewrote some portions of the operating system to make some things easier. They changed the video processor to the 9918A hence the 'A' in '99/4A'. Also TI came out with the expansion box and several cards to make use of it.

If you had a fully expanded system, your computer desk was at least four feet wide, with all your peripherals extending from the right side of the console. When it came to software TI unleashed the real power and graphics of the machine, and many new things began to flow from Lubbock, including some of the kinds of programs that used to require the 'other' brands of computers in order to run them. TI in 1982 and into 1983 started letting third party companies have access to the inner workings of the 99/4A so they could produce (under license) their own software. Atarisoft, Milton Bradly, Parker Brothers, and many others finally got their arcade programs on the market. Unfortunately, by the time things were rolling for them. TI was already headed downhill.

Also about the time the good things were happening with software, TI was looking towards the future and other possibilities of expansion. The engineers were playing with ways to make things simpler, yet more complex. They threw together a half dozen 'all new' 99/xx computers, based upon some market research and other projects. These new computers were little more proposals and brainstorming sessions, as well as prototypes for the new wave of home computers that would renew the infamous computer wars of the early 1980's.



designed by
Steven DeGeare

ACROSS

1. Paul Charlton's program.
2. Steve Karasek's program.
3. Sets of eight bits.
4. RS232 goes to
5. I/O function
6. Disk Parameter
7. WYSIWYG program (new)
8. What comes out of a Synthesizer.
9. Programming language
10. User's group information source.

DOWN

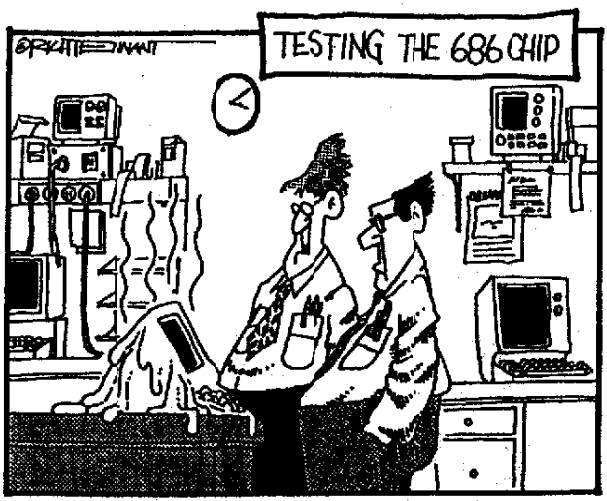
1. Inks the printer
2. Famous Database program
3. Software producer
4. Where your cards go
5. Storage media
6. What members belong to
7. Graphics drawing program
8. Myarc 9640 nickname
9. Compressed to save disk space
10. Keyboard

TEXAS INSTRUMENTS CARTRIDGE CHECK LIST

Check all that apply: Archived, Both, Cartridge, or on Disk

Number	Cartridge	A	B	C	D	Number	Cartridge	A	B	C	D
PHM-3000	Diagnostics	[ ]	[ ]	[ ]	[ ]	PHM-3001	Demonstration	[ ]	[ ]	[ ]	[ ]
PHM-3002	Early Learning Fun	[ ]	[ ]	[ ]	[ ]	PHM-3003	Beginning Grammar	[ ]	[ ]	[ ]	[ ]
PHM-3004	Number Magic	[ ]	[ ]	[ ]	[ ]	PHM-3005	Video Graphs	[ ]	[ ]	[ ]	[ ]
PHM-3006	Home Financial Decisions	[ ]	[ ]	[ ]	[ ]	PHM-3007	Household Budget Management	[ ]	[ ]	[ ]	[ ]
PHM-3008	Video Chess	[ ]	[ ]	[ ]	[ ]	PHM-3009	Football	[ ]	[ ]	[ ]	[ ]
PHM-3010	Physical Fitness	[ ]	[ ]	[ ]	[ ]	PHM-3011	Speech Editor	[ ]	[ ]	[ ]	[ ]
PHM-3012	Securities Analysis	[ ]	[ ]	[ ]	[ ]	PHM-3013	Personal Record Keeping	[ ]	[ ]	[ ]	[ ]
PHM-3014	Statistics	[ ]	[ ]	[ ]	[ ]	PHM-3015	Early Reading	[ ]	[ ]	[ ]	[ ]
PHM-3016	Tax/Investment Record Keeping	[ ]	[ ]	[ ]	[ ]	PHM-3017	Terminal Emulator	[ ]	[ ]	[ ]	[ ]
PHM-3018	Video Games I	[ ]	[ ]	[ ]	[ ]	PHM-3019	Disk Manager	[ ]	[ ]	[ ]	[ ]
PHM-3020	Music Maker	[ ]	[ ]	[ ]	[ ]	PHM-3021	Weight Control and Nutrition	[ ]	[ ]	[ ]	[ ]
PHM-3022	Personal Real Estate	[ ]	[ ]	[ ]	[ ]	PHM-3023	Hunt the Wumpus	[ ]	[ ]	[ ]	[ ]
PHM-3024	Indoor Soccer	[ ]	[ ]	[ ]	[ ]	PHM-3025	Mind Challengers	[ ]	[ ]	[ ]	[ ]
PHM-3026	TI Extended Basic	[ ]	[ ]	[ ]	[ ]	PHM-3027	Addition and Subtraction I	[ ]	[ ]	[ ]	[ ]
PHM-3028	Addition and Subtraction 2	[ ]	[ ]	[ ]	[ ]	PHM-3029	Multiplication I	[ ]	[ ]	[ ]	[ ]
PHM-3030	A-maze-ing	[ ]	[ ]	[ ]	[ ]	PHM-3031	The Attack	[ ]	[ ]	[ ]	[ ]
PHM-3032	Blasto	[ ]	[ ]	[ ]	[ ]	PHM-3033	Blackjack and Poker	[ ]	[ ]	[ ]	[ ]
PHM-3034	Hustle	[ ]	[ ]	[ ]	[ ]	PHM-3035	Terminal Emulator II	[ ]	[ ]	[ ]	[ ]
PHM-3036	Zero Zap	[ ]	[ ]	[ ]	[ ]	PHM-3037	Hang Man	[ ]	[ ]	[ ]	[ ]
PHM-3038	Connect Four	[ ]	[ ]	[ ]	[ ]	PHM-3039	Yahtzee	[ ]	[ ]	[ ]	[ ]
PHM-3040	TI Logo	[ ]	[ ]	[ ]	[ ]	PHM-3041	Adventure	[ ]	[ ]	[ ]	[ ]
PHM-3042	Tunnels of Doom	[ ]	[ ]	[ ]	[ ]	PHM-3043	Reading Fun	[ ]	[ ]	[ ]	[ ]
PHM-3044	Personal Report Generator	[ ]	[ ]	[ ]	[ ]	PHM-3045	SMU Electrical Engineering	[ ]	[ ]	[ ]	[ ]
PHM-3046	Reading On	[ ]	[ ]	[ ]	[ ]	PHM-3047	Reading Roundup	[ ]	[ ]	[ ]	[ ]
PHM-3048	Reading Rally	[ ]	[ ]	[ ]	[ ]	PHM-3049	Division I	[ ]	[ ]	[ ]	[ ]
PHM-3050	Numeration 1	[ ]	[ ]	[ ]	[ ]	PHM-3051	Numeration 2	[ ]	[ ]	[ ]	[ ]
PHM-3052	Tombstone City	[ ]	[ ]	[ ]	[ ]	PHM-3053	TI Invaders	[ ]	[ ]	[ ]	[ ]
PHM-3054	Car Wars	[ ]	[ ]	[ ]	[ ]	PHM-3055	Editor/Assembler	[ ]	[ ]	[ ]	[ ]
PHM-3056	Alpiner	[ ]	[ ]	[ ]	[ ]	PHM-3057	Munch Man	[ ]	[ ]	[ ]	[ ]
PHM-3058	Mini Memory	[ ]	[ ]	[ ]	[ ]	PHM-3059	Scholastic Spelling-Level 3	[ ]	[ ]	[ ]	[ ]
PHM-3060	Scholastic Spelling-Level 4	[ ]	[ ]	[ ]	[ ]	PHM-3061	Scholastic Spelling-Level 5	[ ]	[ ]	[ ]	[ ]
PHM-3062	Scholastic Spelling-Level 6	[ ]	[ ]	[ ]	[ ]	PHM-3063	Touch Typing Tutor	[ ]	[ ]	[ ]	[ ]
PHM-3067	Othello	[ ]	[ ]	[ ]	[ ]	PHM-3082	Reading Flight	[ ]	[ ]	[ ]	[ ]
PHM-3083	Computer Math Games II	[ ]	[ ]	[ ]	[ ]	PHM-3084	Computer Math Games I	[ ]	[ ]	[ ]	[ ]
PHM-3085	Computer Math Games III	[ ]	[ ]	[ ]	[ ]	PHM-3086	Computer Math Games IV	[ ]	[ ]	[ ]	[ ]
PHM-3087	Computer Math Games V	[ ]	[ ]	[ ]	[ ]	PHM-3088	Computer Math Games VI	[ ]	[ ]	[ ]	[ ]
PHM-3089	Disk Manager 2	[ ]	[ ]	[ ]	[ ]	PHM-3090	Addition	[ ]	[ ]	[ ]	[ ]
PHM-3091	Subtraction	[ ]	[ ]	[ ]	[ ]	PHM-3092	Multiplication	[ ]	[ ]	[ ]	[ ]
PHM-3093	Division	[ ]	[ ]	[ ]	[ ]	PHM-3094	Integers	[ ]	[ ]	[ ]	[ ]
PHM-3095	Fractions	[ ]	[ ]	[ ]	[ ]	PHM-3096	Decimals	[ ]	[ ]	[ ]	[ ]
PHM-3097	Percents	[ ]	[ ]	[ ]	[ ]	PHM-3098	Numeration	[ ]	[ ]	[ ]	[ ]
PHM-3098	Number Readyness	[ ]	[ ]	[ ]	[ ]	PHM-3099	Laws of Arithmetic	[ ]	[ ]	[ ]	[ ]
PHM-3100	Equations	[ ]	[ ]	[ ]	[ ]	PHM-3101	Measurement Formulas	[ ]	[ ]	[ ]	[ ]
PHM-3109	TI Logo II	[ ]	[ ]	[ ]	[ ]	PHM-3110	Oklahoma Trail	[ ]	[ ]	[ ]	[ ]
PHM-3111	TI-Writer/Word Processer	[ ]	[ ]	[ ]	[ ]	PHM-3112	Parsec	[ ]	[ ]	[ ]	[ ]
PHM-3113	Microsoft Multiplan	[ ]	[ ]	[ ]	[ ]	PHM-3114	Alligator Mix	[ ]	[ ]	[ ]	[ ]
PHM-3115	Alien Addition	[ ]	[ ]	[ ]	[ ]	PHM-3116	Demolition Division	[ ]	[ ]	[ ]	[ ]
PHM-3117	Dragon Mix	[ ]	[ ]	[ ]	[ ]	PHM-3118	Minus Mission	[ ]	[ ]	[ ]	[ ]
PHM-3119	Kober Multiplication	[ ]	[ ]	[ ]	[ ]	PHM-3122	Pinto Interporter	[ ]	[ ]	[ ]	[ ]
PHM-3131	Hangman	[ ]	[ ]	[ ]	[ ]	PHM-3144	Early Logo Learning Fun	[ ]	[ ]	[ ]	[ ]
PHM-3145	Scraggit	[ ]	[ ]	[ ]	[ ]	PHM-3146	Munch Mobile	[ ]	[ ]	[ ]	[ ]
PHM-3148	Championship Baseball	[ ]	[ ]	[ ]	[ ]	PHM-3149	Space Bandit	[ ]	[ ]	[ ]	[ ]
PHM-3150	Beginning	[ ]	[ ]	[ ]	[ ]	PHM-3151	Bigfoot	[ ]	[ ]	[ ]	[ ]
PHM-3152	Meteor Belt	[ ]	[ ]	[ ]	[ ]	PHM-3153	Super Fly	[ ]	[ ]	[ ]	[ ]
PHM-3154	Terry Turtles Adventure	[ ]	[ ]	[ ]	[ ]	PHM-3155	I'm Hiding	[ ]	[ ]	[ ]	[ ]
PHM-3156	Honey Hunt	[ ]	[ ]	[ ]	[ ]	PHM-3157	Sound Track Trolly	[ ]	[ ]	[ ]	[ ]
PHM-3158	MUNCH	[ ]	[ ]	[ ]	[ ]	PHM-3168	Treasure Island	[ ]	[ ]	[ ]	[ ]
PHM-3169	Word Invasion	[ ]	[ ]	[ ]	[ ]	PHM-3177	Face Maker	[ ]	[ ]	[ ]	[ ]
PHM-3178	Story Machine	[ ]	[ ]	[ ]	[ ]	PHM-3185	Hard Hadar	[ ]	[ ]	[ ]	[ ]
PHM-3189	Pirate Island	[ ]	[ ]	[ ]	[ ]	PHM-3194	Jawbreaker II	[ ]	[ ]	[ ]	[ ]
PHM-3197	Slymoids	[ ]	[ ]	[ ]	[ ]	PHM-3219	Super Demon Attack	[ ]	[ ]	[ ]	[ ]
PHM-3220	Microsurgeon	[ ]	[ ]	[ ]	[ ]	PHM-3222	Fathom	[ ]	[ ]	[ ]	[ ]
PHM-3224	Moonsweeper	[ ]	[ ]	[ ]	[ ]	PHM-3225	Star Trek Simulator	[ ]	[ ]	[ ]	[ ]
PHM-3226	Buck Rogers	[ ]	[ ]	[ ]	[ ]	PHM-3227	Congo Bongo	[ ]	[ ]	[ ]	[ ]
PHM-3229	Hopper	[ ]	[ ]	[ ]	[ ]	PHM-3233	Burger Time	[ ]	[ ]	[ ]	[ ]
PHM-	Stargazer 1	[ ]	[ ]	[ ]	[ ]	PHM-	Stargazer 2	[ ]	[ ]	[ ]	[ ]
PHM-	Stargazer 3	[ ]	[ ]	[ ]	[ ]						

If you have any changes or additions PLEASE call Mark at (618)233-9826 Voice or (618)233-1768 BBS.



"IT'S FAST ENOUGH FOR ME."

THE KANSAS CITY 99ERS ANNOUNCES ITS

SPRING 1990 COMPUTER SWAP-N-SHOP

WHEN	SUNDAY, APRIL 22, 1990
TIME:	2:00 P.M. TO 4:30 P.M.
ADMISSION:	$2.00 PER PERSON
WHERE:	THE ARTHUR MAG CENTER LOCATED BEHIND MIDWEST RESEARCH INSTITUTE ROCKHILL ROAD & VOLKER BLVD. KANSAS CITY, MISSOURI

PLEASE DIRECT ANY QUESTIONS TO WALTER BLOOD AT (913) 371-1092 IN THE EVENINGS

RAMBLINGS FROM THE PRES
by Steven DeGeare

As the KC TI 99/4A Users Group enters into its ninth year of existence. Why not take a moment to look back in history.

Remember when in 1987 version 1.0 of MDOS was released for the Geneve and we had our first of what has become an annual picnic.

Remember the day you first took out your console and hook it up. You flipped the power switch on and wondered, "Now what in the world do I do?" Three many years later, perhaps a few of us still wonder what in the world we are doing.

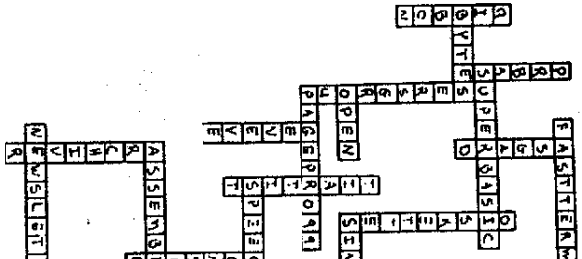
Remember the first inside Swap-N-Shop we as a users group sponsored. Now it has become a tradition. Speaking of Swap-N-Shop. It is that time of year again. Yes the KC 99ers are having their sixth semi-annual Swap-N-Shop on April 22, 1990. So get the word out. Get your cash together. Then bring yourself, your wife, your kids and your spare equipment and software. Let's again make it a profitable time for all.

Enuff for now. Till next time. Keep the group strong.

==========

The following program is a simple way to post messages on your screen. Always take the time to type in this simple ones for that is how you learned to program.

```
10 !REPRINTED FROM THE SUNCOAST BEE
PER OCT 1989
40 MCS$="BRANDON TI 99/4A USERS GRO
UP"
45 CALL SCREEN(2)!! CALL CLEAR :: C
ALL MAGNIFY(2)
50 FOR I=0 TO 14 :: CALL COLOR(I,16
,1)!! NEXT I
55 CALL DELSPRITE(ALL)
60 DISPLAY AT(2,4)ERASE ALL:"TI BIL
LBOARD"!TAB(9)!"by"!" Herman Nieuwe
nhuis" !!
DISPLAY AT(8,1)!" Enter message"!"
or name to display:"!MCS$
65 DISPLAY AT(22,1):"Press any key
after all     letters are in motion
 to     abort"
70 ACCEPT AT(14,1)SIZE(-28)!MCS$ !!
 IF MCS$="" THEN 70
75 CALL CLEAR
80 C=.968-LEN(MCS$)*.021+1
85 RANDOMIZE
90 FOR N=1 TO LEN(MCS$)!! CALL SPRI
TE(#N,ASC(SEG$(MCS$,N,1)),INT(RND*(
10))+3,(N+(28-LEN(MCS$))/2)*6,N*8)!
! NEXT N
95 FOR N=LEN(MCS$)TO 1 STEP -1 !! C
ALL MOTION(#N,0,-20)
100 FOR D=1 TO 475*C :: NEXT D !! N
EXT N
105 CALL KEY(3,K,S)!! IF S=0 THEN 1
05
110 DISPLAY AT(12,7)ERASE ALL:"Do a
nother?:Y"
115 ACCEPT AT(12,19)SIZE(-1):X$ !!
IF X$="Y" OR X$="y" THEN 55
120 CALL CLEAR
```



SECTOR SHARING

by Mark Schafer
BLUEGRASS 99 COMPUTER SOCIETY, INC.

They say necessity is the mother of invention. And in this case, it's the father. I think I've discovered something you'll find intriguing. Take a look at the following disk catalog:

```
DSK1 - DISKNAME= FNWEB/ctl
 AVAILABLE=  7  USED= 351
FILENAME  SIZE    TYPE     P
---------- ---- ---------- -
 AS          33 PROGRAM
 A1          22 PROGRAM
 CF          31 PROGRAM
 EG          25 PROGRAM
 CHARA1       5 PROGRAM
 01          33 PROGRAM
 02          33 PROGRAM
 03          29 PROGRAM
 0U          33 PROGRAM
 0V          33 PROGRAM
 0W          29 PROGRAM
 EA           9 PROGRAM
 ED          33 PROGRAM
 EE          19 PROGRAM
 LH          12 PROGRAM
 LOAD        31 PROGRAM
 00          12 PROGRAM
 SL          10 PROGRAM
 SYSCOM       6 PROGRAM
 UL           4 PROGRAM
```

If you don't notice anything strange, add up the sizes of the files and compare that to the number of sectors used. How did I do that? Why did I do that? That's what I'm here to tell you.

The above is the catalog of my Funnelweb disk. What I've done is to make it so that some files take up the same space as other files which is the concept I call sector-sharing.

First, let's get into why I did it. I have Disk Utilities by John Birdwell, one of its features is the ability to change to default system setup. The trouble was sometimes I will want the defaults to be one way, and sometimes I will want them another. Now I could change the setup in the program when I need to, but this is some trouble. The ideal solution would be to have two (or more) copies of the program on the disk and boot the one with the defaults I want at the time. But I only have one 555K disk drive, so I clearly don't have the room for this. Just like limited memory can lead to tight coding, limited disk space can lead to creative disk utilization.

All I wanted to do was to change the first sector. So I got the idea to create a file that would have a different first sector, but share the rest of the sectors with the original file!

The steps to do this, I believe, can be done in any order. Basically, it goes like this: creating the new header sectors, creating the modified sector, updating the disk catalog, marking the used sectors, and renaming the new files. The beauty is that Disk Utilities itself can handle all of the above in one session, but I suppose any sector editor and disk manager will do.

So let's create the new header sectors first. Each file on a disk has to have a sector that identifies the type of file it is and where it is on the disk. The first step here is to find out what sectors are free. One way to do this is to look at sector 0 starting at byte>38, look for non-F's, and figure out what sectors correspond to the blank bits. Or you could use Disk Utilities to print the disk report and figure out what sectors are contained in no file. In my case, sectors>13 to>1b were available. You could put them anywhere, but the normal thing is to put header sectors in the>02 to>21 range.

Next, I need to know where on the disk the files I'm going to "copy" are, as well as where their header sectors are. The disk report has this information. So now you edit the header sector of the three files. Go to the first one first. You need to change two things on it. Change the name to something that would fall at the end of the disk catalog. This way, we don't have to insert when we change sector 1. I called my new files ZX, ZY and ZZ. For the file that has the modified sector, you need to change the segments starting at byte>1C. Insert three bytes at this point. This may be a little more difficult with some sector editors. Put in the following three bytes at 1Cr yz 0z 00, where xyz is the sector we're going to create in step 2. In my case, it was>14, so I inserted 14 00 00. Then add one to the next byte, so if it's>57, make it>58. This process makes it so this file is in the same place as the original file except its first sector is different. If you're changing a sector in the middle, this is a bit more difficult. When you save it back, put it at the first available sector you found. For the remaining header sectors, I just simply changed their names and saved them to next available sectors since they are to share exactly the same sectors.

Once you've got that done, the rest of it is a cinch. To create the modified sector, simply edit the sector you wish to change, make the appropriate changes, and save it to the free sector you indicated in step 1 (#1 in my case.) Normally the sectors contained in a file are higher than>21, but I didn't have any free in that area.

Next, it's time to change the list catalog at sector 1. Simply put the header sectors you created in step 1 at the first available 0000 in sector 1. I appended 0013 0014 0015 to add my three new files.

The next step is to tell the disk what sectors we've used. With Disk Utilities, you just use the Mark Sector feature. With others, you may have to figure out what bits they correspond to in sector 0 and make the changes yourself.

The last step is to rename the new files what you really want to call them. I called mine 01, 02, and 03. The last bytes have to be consecutive so that they load as one continuous program. After this, I had to configure Funnelweb to be able to load my new program. So now, when I run Disk Utilities, I have the choice of the options in 0U or the options in 01. They both load just fine.

But there are some consequences. There's the problem of copying. If you try to copy a sector-sharing disk by file, the duplicate will unshare them. Also, you may get an out-of-space error. So to copy such a disk, you should use a sector copier. Then there's the problem of what happens if you want to copy the sector-sharing files, but not the whole disk. If you can't do a direct copy sector x to sector x, I would recommend that you find a way to sector copy the whole disk and delete the files you didn't want. Or you could copy only one of them and start the operation over again on the new disk.

So to make a copy of this 95-sector program, it took only 4 additional sectors: 3 for each new header sector, and 1 for the modified sector. Shorter files would need even fewer additional sectors. I could go on and make another version of this program, but I think I'm happy with just two. I wonder if I have any other files I can do this to...